

IN THE CLAIMS

Please amend the following claims.

1. (Currently Amended) A contact in a three dimensional memory device comprising:
 - a conductive film;
 - an opening formed through a plurality of film stacks of a three dimensional memory device, said opening having a top and bottom wherein said bottom is formed on said conductive film, said opening having a first sidewall and second sidewall₁ wherein said first sidewall is opposite of said second sidewall, and wherein said first sidewall has a stair step configuration₁ wherein said first sidewall is closer to said second sidewall at said bottom of said opening than at the top of said opening; and
 - a conductor formed on said stair step configuration₁ said first sidewall of said opening₁ and on said bottom of said opening on said conductive film.
2. The contact of claim 1 wherein said second sidewall has a second stair step configuration.
3. The contact of claim 1 wherein said continuous conductor is aluminum or aluminum alloy.
4. The contact of claim 1 wherein said first sidewall has a slope (height:width) of less than 2:1.

5. A contact in a three dimensional memory device comprising:
a contact opening formed through a plurality of film stacks of a three-dimensional memory, said contact having a bottom on an interconnection, said contact opening having a first and second laterally opposite sidewalls, wherein said first sidewall comprises:
a first vertical side extending up from said bottom;
a first horizontal surface extending from said first vertical side to a second vertical side, said second vertical side further spaced from said second sidewall than said first vertical side;
a second horizontal surface extending from said second vertical side to a third vertical side wherein said third vertical side is spaced further from said second sidewall than said second vertical side; and
a conductor formed on said first sidewall and on said interconnection in the bottom of said contact opening.

6. The contact of claim 5 wherein said conductor is an aluminum or an aluminum alloy.

7. (Currently Amended) A contact ~~of~~ in a three dimensional memory device comprising:
a first and a second film stack of a three dimensional memory device, said first film stack said having a first part and a second part separated by a first gap, said first film stack having a top conductive film;
said second film stack formed on said first film stack, said second film stack having a first part and a second part separated by a second gap, wherein said second gap is formed over said first gap so as to expose said top conductive film of said first film stack, said second film stack having a top conductive film; and

a conductive contact film formed on said top conductive film ~~on~~ of said second film stack and on said top conductive film of said first film stack in said second gap.

8. The contact of claim 7 further comprising a third film stack having a top conductive film, said third film stack formed over said second film stack, said third film stack having a first part and a second part separated by a third gap over said second gap wherein said third gap is larger than said second gap so as to expose said top conductive film of said second film stack and wherein said continuous conductive film is formed on said top conductive film of said second film stack in said third gap.

9. A contact comprising:
a first film stack having a first part and a second part separated by a first gap, said first film stack having a top conductive film wherein said first film stack comprises a top P+ silicon film formed on a silicide film which is formed on a P+ silicon film which is formed on a P- silicon film which is formed on an antifuse layer;
a second film stack formed on said first film stack, said second film stack having a first part and a second part separated by a second gap formed over said first gap so as to expose said top conductive film of said first film stack, said second film stack having a top conductive film; and
a continuous conductive contact film formed on said top conductive film on said second film stack and on said top conductive film of said first film stack in said second gap.

10. The contact of claim 9 wherein said second film stack comprises a top N+ silicon film formed on a silicide film which is formed on a N+ silicon film which is formed on a N- silicon film which is formed on a antifuse film.

11. A contact comprising:

a first film stack having a first part and a second part separated by a first gap, said first film stack having a top conductive film;

a second film stack formed on said first film stack, said second film stack having a first part and a second part separated by a second gap formed over said first gap so as to expose said top conductive film of said first film stack, said second film stack having a top conductive film; and

a continuous conductive contact film formed on said top conductive film on said second film stack and on said top conductive film of said first film stack in said second gap wherein said first film stack comprises a top N+ silicon film formed on a silicide film which is formed on a N+ silicon film which is formed on a N- silicon film which is formed on a antifuse film.

12. The contact of claim 11 wherein said second film stack comprises a top P+ silicon film formed on a silicide film which is formed on a P+ silicon film which is formed on a P- silicon film which is formed on a antifuse layer.

13. A contact comprising:

a first film stack having a first part and a second part separated by a first gap, said first film stack having a top conductive film;

a second film stack formed on said first film stack, said second film stack having a first part and a second part separated by a second gap formed over

said first gap so as to expose said top conductive film of said first film stack, said second film stack having a top conductive film; and

a continuous conductive contact film formed on said top conductive film on said second film stack and on said top conductive film of said first film stack in said second gap wherein said continuous conductive contact film comprises a top P+ silicon film formed on a silicide film.

14. A contact comprising:

a first film stack having a first part and a second part separated by a first gap, said first film stack having a top conductive film;

a second film stack formed on said first film stack, said second film stack having a first part and a second part separated by a second gap formed over said first gap so as to expose said top conductive film of said first film stack, said second film stack having a top conductive film; and

a continuous conductive contact film formed on said top conductive film on said second film stack and on said top conductive film of said first film stack in said second gap wherein said continuous conductive contact film comprises a top N+ silicon film formed on a silicide film.

15. The contact of claim 7 wherein said continuous conductive film is aluminum or an aluminum alloy.

26. The contact of claim 13 wherein said silicide film comprises titanium silicide.

27. The contact of claim 14 wherein said silicide film comprises titanium silicide.

28. A contact comprising:

a contact opening having a bottom on an interconnection, said contact opening having a first and second laterally opposite sidewalls, wherein said first sidewall comprises:

a first vertical side extending up from said bottom;

a first horizontal surface extending from said first vertical side to a second vertical side, said second vertical side further spaced from said second sidewall than said first vertical plane;

a second horizontal surface extending from said second vertical side to a third vertical side wherein said third vertical side is spaced further from said second sidewall than said second vertical side; and

a continuous conductor formed on said first sidewall and on said interconnection in the bottom of said contact opening wherein said continuous conductor comprises a top p+ silicon film formed on a silicide film.

29. The contact of claim 28 wherein said silicide film comprises titanium silicide.

30. A contact comprising:

a contact opening having a bottom on an interconnection, said contact opening having a first and second laterally opposite sidewalls, wherein said first sidewall comprises:

a first vertical side extending up from said bottom;

a first horizontal surface extending from said first vertical side to a second vertical side, said second vertical side further spaced from said second sidewall than said first vertical side;

a second horizontal surface extending from said second vertical side to a third vertical side wherein said third vertical side is spaced further from said second sidewall than said second vertical side; and

a continuous conductor formed on said first sidewall and on said interconnection in the bottom of said contact opening wherein said continuous conductor comprises a top n+ silicon film formed on a silicide film.

31. The contact of claim 30 wherein the silicide film comprises titanium silicide.